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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,377	04/17/2002	Brian James Knight	56162.000303	5972
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HUNTON & WILLIAMS LLP INTELLECTUAL PROPERTY DEPARTMENT 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109			EXAMINER LEVITAN, DMITRY	
			ART UNIT 2662	PAPER NUMBER

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/063,377

Applicant(s)

KNIGHT, BRIAN JAMES

Examiner

Dmitry Levitan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The attempt to incorporate subject matter into this application by reference to 09/613,098 is ineffective because the incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).
3. The disclosure is objected to, because abbreviations or acronyms OAM and BIP are cited throughout the specification without explanation. Applicant should provide a full explanation for the acronyms at least at their first occurrence in the specification.

*Claim Rejections - 35 USC § 112*

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in

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the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claims 1, 9 and 17, claims limitations “first hardware filter” and “first hardware lookup table”.

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 9 and 17 limitations “examining the cell header with a first hardware filter” are unclear, because it is not understood what “examining” means in the context of the claims.

Claims 1, 9 and 17 limitations “identifying the identifying a cell flow” are unclear as written.

Claims 1, 9 and 17 limitations “hardware lookup table” and “software lookup table” are unclear, because it is not understood how a lookup table can be identified as a software or a hardware table.

*Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4, 9-12 and 17-20 are rejected (as best understood) under 35 U.S.C. 103(a) as being unpatentable over Ikeda (US 6,580,707) in view of Wicklund (US 6,034,958).

10. Regarding claims 1, 9 and 17, Ikeda substantially teaches the limitations of the claims. Ikeda teaches a method, a system and a program for handling ATM cells (ATM router, shown on Fig. 2 and 3 1:30-50), comprising:

Receiving ATM cell having a cell header with destination information (receiving cell with headers, inherently comprising destination address VPI and VCI, because destination address is essential for an ATM cell),

Examining the cell with a first hardware filter and determining whether the cell destination information is included within a first lookup table (utilizing a hardware circuit 12 to examine the cells for the destination information stored in the table 21, shown on Fig. 3 and 4:6-24),

Identifying a cell flow structure associated with an entry in the first lookup table associated with the cell destination information if it is determined that the cell destination information is included within the first lookup table (identifying the cells with destination

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information of table 21, as shown in steps S100 and S104 to acquire forwarding information/flow structure S106, shown on Fig. 7 and 5:8-6:16), and

Performing the following if it is determined that the cell destination is not included within the first lookup table (if the search results negative, as shown in step S105 on Fig. 7, performing the hash function):

Passing the ATM cell to a second software filter (passing the cells to hash coding for a search in a second lookup table 22, utilized by processor 11/second software filter, as processor 11 uses software process to perform the search 7:7-30),

Examining the cell header with the second software filter, and identifying a cell flow associated with an entry in the second lookup table associated with the cell destination information (performing the search by processor 11 in the same manner as in the prior art, shown on Fig. 1 and 1:30-50, utilizing a forwarding table).

In addition, Ikeda teaches assigning portions of the hardware searching circuit 12 to be performed by processor 11 if needed 8:6-20.

Ikeda does not teach destination information as only VPI and VCI information of a cell header, because it is directed to the IP address and utilizing the second lookup table as a software table.

Wicklund teaches destination information as only VPI and VCI information of a cell header, as shown on Fig. 1 and 1:45-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using destination information as only VPI and VCI information of a cell header of Wicklund to the system of Ikeda and implement the second lookup table as a software table to

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utilize the system in pure ATM environment and use the memory resources of the processor 11 to save cost for the system by using smaller size memory.

11. Regarding claims 2, 10 and 18, Ikeda teaches the first hardware lookup table limited to a predetermined size to address communications of a comparatively high frequency by pre-storing the relevant information 4:16-19.

12. Regarding claims 3, 11 and 19, Ikeda in view of Wicklund substantially teaches the limitations of the claims (see claim 1 rejection above), including the cell destination information comprising VPI and VCI (Wicklund 3:50-55) and using separate searches for VPI and VCI (Wicklund 4:45-5:30).

Ikeda in view of Wicklund does not teach first hardware table comprising VPI and VCI parts.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to separate the hardware table of Ikeda into VPI and VCI parts to implement separate searches of VCI and VPI of Wicklund to the system of Ikeda to simplify the search process by reducing code length in each table.

13. Regarding claims 4, 12 and 20, Wicklund teaches hashing VCI and VPI extracted from the header and identifying a flow structure associated with an entry in a hash table associated with VPI or VCI (steps 54, 56 and 48 on Fig. 2, comprising hash coding of VPI and VCI, and identifying a connection info/flow structure in VPVC table 4:1-45).

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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'DL' followed by a stylized name.

Dmitry Levitan  
Patent Examiner.  
1/24/06